

2. (Amended) The method according to claim 1, wherein the lead includes an electrode patch, and [extending] providing the lead includes positioning the electrode patch epicardially on a heart adjacent to the coronary artery.
3. (Amended) The method according to claim 1, wherein [extending] providing the lead includes [inserting] positioning the lead into a vein adjacent the coronary artery, and generating the electric field includes producing an electric field of sufficient strength to pass through walls of the vein and the coronary artery to prevent plaque from adhering to the wall of the coronary artery.
4. (Amended) The method according to claim 1, wherein [inserting] providing the implant includes sensing a heart rhythm of the patient's heart[, and generating the electrical field includes outputting a non-excitatory electrical field such that the electrical field does not interfere with the heart rhythm].
7. (Amended) The method according to claim 1, wherein [connecting the implant to] providing a lead includes connecting the implant to at least two electrodes on the lead such that the electrical field is generated between the at least two electrodes.
8. (Amended) The method according to claim 1, wherein [connecting the implant to] providing a lead includes connecting the implant to at least two leads each having one electrode, and spacing the two electrodes apart from each other such that the electrical field generated between the two electrodes reduces plaque build-up in the coronary artery.
9. (Amended) [The method of claim 1] A method for preventing plaque build-up in a coronary artery, comprising:
providing an electrical field generating device, wherein providing the electrical field generating device includes inserting an implant in a patient's body, connecting the implant to a lead, and extending the lead within the patient's body adjacent the coronary artery; and

generating an electrical field in the coronary artery to prevent plaque build-up in the coronary artery, wherein generating the electrical field includes generating the electrical field during [the] a refractory period at a higher strength and generating the electrical field during [the] a non-refractory period at a lower strength.

10. (Amended) An apparatus for preventing plaque build-up in a coronary artery, comprising:

a heart rhythm sensing unit;

an implantable electrical field generating device connected to the heart rhythm sensing unit, the electrical field generating device produces an electrical field that does not interfere with the heart rhythm; and

a lead unit connected to the electrical field generating device, the lead unit producing the electrical field adjacent the coronary artery to reduce plaque build-up in the coronary artery.

11. (Amended) The apparatus according to claim 10, wherein the electrical field generating device includes [an implantable] a hermetically sealed housing, a power source within the housing, and electrical field generating circuitry connecting the power source to the lead unit.

13. (Amended) The apparatus according to claim 10, wherein the lead unit is an intracardial lead and is adaptable to be positioned in a vein adjacent the coronary artery.

14. (Amended) The apparatus according to claim 10, wherein the lead unit includes two leads each having an electrode thereon, the electrodes being adaptable to be spaced from one another in a body with the coronary artery therebetween, and the lead unit flowing current between the two leads to create the electrical field in the coronary artery and prevent plaque build-up in the coronary artery.

15. (Amended) [The apparatus according to claim 14] An apparatus for preventing plaque build-up in a coronary artery, comprising:

a heart rhythm sensing unit;

an electrical field generating device connected to the heart rhythm sensing unit, the electrical field generating device produces an electrical field that does not interfere with the heart rhythm; and

a lead unit connected to the electrical field generating device, the lead unit producing the electrical field adjacent the coronary artery to reduce plaque build-up in the coronary artery,

wherein the lead unit includes two leads each having an electrode thereon, the electrodes being adaptable to be spaced from one another in a body with the coronary artery therebetween, and the lead unit flowing current between the two leads to create the electrical field in the coronary artery and prevent plaque build-up in the coronary artery ,


wherein one of the two leads is adaptable to be positioned in an anterior vein and a second of the two leads is adaptable to be positioned in a lateral vein, and the electrical field is a non-heart-excitatory signal passing through a left marginal artery and an anterior interventricular artery.

20. (Amended) The apparatus according to claim 10, wherein the electrical field generating device produces an electrical field during a refractory period of the [heart] heart rhythm.

Please add the following new claims:

21.(New) An apparatus for preventing plaque build-up in a coronary artery, comprising:

a heart rhythm sensing unit;

 an implantable, electrical field generating device connected to the heart rhythm sensing unit, the electrical field generating device produces a signal having a first strength during a refractory period and a second strength during a non-refractory period; and

a lead unit connected to the electrical field generating device, the lead unit being adapted to produce an electrical field adjacent the coronary artery to reduce plaque build-up in the coronary artery based on the signal.

AMENDMENT AND RESPONSE

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22.(New) The apparatus of claim 21, wherein the lead unit includes a first lead and a second lead, the first lead is adapted to be positioned in an anterior vein and the second lead is adapted to be positioned in a lateral vein.

23.(New) The apparatus of claim 22, wherein the electrical field is a non-heart-excitatory signal passing through a left marginal artery and an anterior interventricular artery.

24. (New) An apparatus for preventing plaque build-up in a coronary artery, comprising:
a electrical signal generating device; and
a lead unit connected to the electrical signal generating device, the lead unit includes a first electrode adapted to be positioned in a lateral vein and a second electrode adapted to be positioned in an anterior vein, the first and second electrodes being adapted to produce a non-heart-excitatory signal electrical field in the coronary artery to prevent plaque build-up in the coronary artery.

25. (New) The apparatus of claim 24, wherein the electrical signal generating device includes a heart rhythm sensing unit.

REMARKS

Claims 1 - 4, 7 - 11, 13 - 15 and 20 are amended. Claim 21 - 25 are added. Claims 1 - 25 are pending in this application.

Claims 1 - 4 and 7 - 8 are amended to clarify the claims. The amendments are not narrowing. Specifically, claim 1, first paragraph is amended to clarify the providing and electric field generating device. Claims 2-4 and 7-8 are amended to conform to claim 1.

Claims 13 - 15 are amended to clarify the claims. The amendments are not narrowing.

Claims 9 and 20 were amended to clarify the claims. The amendments are non-narrowing. Specifically, the claim 9 amendments correct articles before nouns. The claim 20 amendment corrects a typographical error.